approach

OCTOBER 1979 THE NAVAL AVIATION SAFETY REVIEW

As I sit here naked

AT the time of this writing, it is a hot, hazy day in mid-July. In order to prepare myself for writing this cold weather ops article, I decided that I needed to have my environment consistent with my subject. I have taken off all my clothes, dumped *Ivory Snow* all over my desk, and turned my air-conditioner on max cold. *The President would be very upset about this, but the secretaries seem to be enjoying it! Rime ice is beginning to build up on various parts of my body, so I'll hurry and get to the point.*

The first thing that comes to mind is how cold and uncomfortable it gets in the winter when you don't have the proper clothing. Preflights, fueling operations, and line duties become acts of endurance. Unit commanders need to make sure that they have adequate winter clothes for all personnel that require them. Aircrews need to remember that their winter garments won't do much good if they are left at home after using them for last weekend's ski trip. Even with the best winter gear the Navy has to offer, it will take a lot of self-discipline to do a thorough preflight or to take all the time you need to move an aircraft.

A thorough preflight, ironically, is even more important now that seals begin to freeze and crack, ice forms on control surfaces, and electronic gear *plays dead* for the first half-hour. Equipment that may require only a quick check in warm weather may now require a lot of patience and some careful analysis. *Speaking of equipment, I think some of mine is beginning to freeze.*

The area that really calls for some expert planning for the upcoming months is that of local SOP. It may be prudent to plan to tow aircraft through spots where now you easily taxi. It could be helpful to remind the base snow removal people that a taxiway plowed for a BD-5 won't quite make it. Practicing your taxi without the use of brakes may prepare you for what it'll be like when the ramp turns into a giant ice rink.

Basically, all this boils down to the fact that you have a long winter and a lot of work right around the corner. It will be a lot easier and a **LOT SAFER** if you start planning for it now. *Besides that, if I'm willing to sit here freezing to death in the middle of July, risking frostbite on important areas of my body, you at least owe me the courtesy of giving some thought to cold weather operations.* ◄

Vol. 25 No. 4

approach

NAVAIR 00-75-510

Painting of ski-configured C-130 by Martin O'Conner specifically for APPROACH, courtesy Lockheed-Georgia Company. This is the 25th year of flight for the hearty Hercules.

Flying the Morning After the Night Before 2
By Dr. L. M. Wise. If you drink alcohol, you need to read this one.

Power Required Exceeded Power Available 10
Poor planning and poor headwork equals one dead H-46.

Herculean Snowmobile 16
Landing on ice and snow takes a little extra planning.

Want to Buy a Farm? 24
By CDR W. R. Jenkinson. Poor communications that almost led to catastrophe.

Air Breaks 6

PQS Management Problems? 8
By RMCS(SS) R. Hillman

Oriental Gas Shortage 13

Getting the Word Out 14

There Must Be a Better Way 18
By LCDR John Ogle

Airfield Profile No. 9: NAS North Island (NZY) 20
By Art Adams

Bravo Zulu 27

What in the World Is the ILS/AMP? 28
By LCDR J. T. Shields

Letters 30

Mouth to Mouth 32

RADM W. B. Warwick, Commander, Naval Safety Center

CAPT W. F. Rau, Chief of Staff
CAPT C. L. McGathy, Director, Aviation Safety Programs
CDR William J. Isenhour, Head, Safety Publications
LCDR Bill Redus, Publications Manager
LT Dale E. Smith, Editor
Robert Trotter, Art Director
E. A. Homer, Fixed-Wing Writer
C. B. Weisiger, Helicopter Writer
Blake Rader, Illustrator
Jack LaBar, Illustrator
Catherine M. Wizieck, Editorial Assistant
Valerie E. Williams, Type Composer
Sharon Schulze, Type Composer
Doris Sumner, Circulation

Contents should not be considered as regulations, orders, or directives and may not be construed as incriminating under Art. 31, UCMJ. Views of guest-written articles are not necessarily those of NAVSAFECEN. Photos are Official Navy or as credited. Photographs used have no strict relationship to the text. Official distribution handled by NAVSAFECEN, Safety Pub. Dept., NAS Norfolk, VA 23511. Phone: (804) 444-1321. Printed in accordance with Dept. of the Navy Publications and Printing Regulations, NAVEXOS P-35. Library of Congress Catalog No. 57 60020.

Seventy-nine percent of all subjects "under the influence" failed to correct at least one major error.

flying the morning after the night before

By Dr. Leon M. Wise
Director, Aviation Psychology Laboratory
Heidelberg College
Tiffin, OH

Prologue

The following article is reprinted from the U.S. Army Aviation Digest. OPNAV 3710.7J is specific in terms of time from last drink to flight planning, and indicates that alcohol in the bloodstream or symptomatic hangover is cause for grounding, however, it does not give information on the magnitude of problems that alcohol can cause for aviators. The article below may give you some surprising insight into how serious and long lasting the effects of alcohol are.

A technician presets errors in simulator prior to test.

Subject scans instruments during simulator flight.

THE Aviation Psychology Laboratory at Heidelberg College experimented with alcohol as a variable in flight safety more than 10 years ago. We used a static single-engine jet flight simulator and a .08 percent blood alcohol level (not considered an intoxicating level by many states). Almost without exception our subjects exhibited very serious errors of omission.

These errors, had the aircraft been real, frequently would have resulted in fatal mishaps, and at least would have resulted in placing the plane and its occupants in potentially dangerous attitudes and situations. The most interesting finding overall was that the effects of the alcohol were greatest on those "pilots" who, on nonalcohol flights, had shown themselves to be the smoothest, best coordinated, most flawless, and coolest under pressure. If they were relaxed when they mounted the flight simulator, this condition was drastically changed by the alcohol, and performance deteriorated accordingly.

Behaviors such as dumping fuel, inadvertently putting the landing gear down at high speeds, placing the aircraft in unrecoverable attitudes, and attempting to land at 10,780 feet rather than 780 feet, the local field elevation, are but a few examples. However, so that these findings could not be attributed to chance, we repeated the experiment using different subjects with basically the same results. A summary of these findings was published (*Tac Attack*, June 1973).

A follow-on study then examined the effects of alcohol on errors of omission, e.g., forgetting an important function or overlooking an important detail. For this study we used the same simulator but were interested in how accurately subjects could follow a preflight checklist. In the case of our simulator, 78 items comprised the checklist which each subject took on every flight. The task in this

Simulator and control panel used in evaluation.

experiment was basically the same as that of any pilot: to begin with the first item and, sequentially, perform each function listed, continuing systematically down the list until all items had been completed.

Prior to all flights, the experimenters, without the knowledge of the subjects, preset several errors:

- Brakes *OFF*.
- Landing gear handle *UP*.
- Altimeter mis-set by 1000 feet.

Close adherence to the checklist should have caught all of the preset errors. Each subject "flew" two test flights, one without alcohol and, about 1 month later, one with alcohol (.08 percent blood alcohol level). The results were as follows:

- Under the no-alcohol condition, 11 percent of all subjects failed to correct at least one major preset error.
- Under the influence of alcohol, 79 percent of all subjects failed to correct at least one major error.

These pilots, it should be remembered, were considered legally sober and capable of driving an automobile in most states. Some of these data were also published (*Allegheny Air Lines Quarterly*, November 1975).

Most of our experiments were conducted in the late afternoon or early evening. We noticed that some of our subjects complained in class the following morning that they still "felt lousy" due to the previous day's flight. A check of the literature showed that the amounts of alcohol ingested essentially should have metabolized easily within 10 hours after drinking. In addition, from perusal of airline publications and military aviation journals, it also was noted that the general rule of thumb for social drinking recommended to pilots was to allow 8 to 12 hours between "bottle and throttle." It was our thinking at the time that, although there was no longer any detectable alcohol in the blood, hangover effects might still produce a decrease in performance of complex tasks such as the psychomotor responses required in flying. Our most recent study followed this line of reasoning, and we set out to test the so-called "hangover" or residual effects of alcohol. It is presented in abbreviated form here.

The subjects were male and female undergraduates. The primary apparatus was a modified C-11C Jet Flight Instrument Trainer, a completely instrumented static single-engine simulator formerly used in the instrument training of military pilots.

The subjects already were familiar with preflight, inflight, and postflight checklist responses and the basics of flying prior to the experiment proper. A 6- by 9-inch

APPROACH (USPS 016-510) is a monthly publication published by Commander, Naval Safety Center, Norfolk, VA 23511. Subscription price is $15.00 per year; $3.75 additional for foreign mailing. Subscription requests should be directed to: Superintendent of Documents, Government Printing Office, Washington, DC 20402. Controlled circulation postage paid at Norfolk, VA.

card containing a detailed checklist was given to each subject and all subjects were told to adhere to it religiously. This was followed by actual "hands on" simulated flight consisting of takeoff, climbout, leveling at altitude, and full stop landings. When the subjects reached the point where they could successfully handle these fully checklisted "flights" at least three times consecutively without the slightest error, the experiment proper was begun.

After this pretraining, but before the first test flight (nonalcoholic), the following errors were preset by the experimenters:

- Brakes were placed in the *OFF* position.
- Landing gear handle was put in the *UP* position.
- Fuel select switch was placed on *Auxiliary Tanks.*
- Dive flap switch was put in the *Down* or *Extended* position.
- Wing flaps were set at 50 percent.
- Altimeter was adjusted to 1000 feet above local ground level.

At the preflight briefing, each subject was told to take off, climb to 6000 feet, and maintain that for 5 minutes. When requested to do so, the subject was to prepare for a landing and complete the landing at his discretion. The main data for the nonalcoholic flights consisted of the number of preset errors each subject failed to correct prior to takeoff.

The only essential difference between the above described flights and the second test flights (alcohol) was that 30 minutes before the alcohol flights, each subject was given enough 80-proof vodka to attain a blood alcohol level of .10 percent (the minimum legally intoxicating level in the state of Ohio and many other states), mixed with an equal amount of ginger ale.

Finally, a third test flight was given 14 hours after the alcohol flight.

The results were interesting to say the least. During the first test flight (nonalcohol), 10 percent of all subjects overlooked at least one of the major preset errors. For the alcohol flight, 89 percent of all subjects made at least one oversight error. Fourteen hours after alcohol intake, 68 percent of all subjects still overlooked at least one preset error! It is apparent that performance 14 hours after alcohol intake was much more like that 30 minutes after intake than that of the first nonalcohol flight.

This evidence suggests that although most, if not all, of the alcohol had been processed through the body during the 14 hours following intake, the residual effects were contributing to this performance deterioration. I suggest all professional pilots be made aware of this residual effect and that they rethink and possibly recalculate the margin of safety implicit in the old rule of thumb, 8 to 12 hours between "bottle and throttle." ◄

Fourteen hours after alcohol intake, 60 percent of the subjects still overlooked at least one preset error.

The 12 hours from bottle to throttle is no "rule of thumb" for naval aviators. OPNAVINST 3710.7J, para. 722.e.(c), specifically states, "Any form of alcohol intake within 12 hours prior to **flight planning** *is prohibited."*

Some Little Things. The SH-3, call sign 401, headed for the rendezvous point after completing an operational shipping search. They were cruising at 5000 feet, in VMC, at 110 knots. There was a disparity between forecast/actual winds aloft, which caused a course deviation of 60 miles. The HAC of 401 called his ship and requested a UHF steer and radar vectors. Their UHF went sour, but the ship advised the low freq ADF was UP, full power. Their ship also requested accompanying ships, including a designated helicopter control unit, to provide radar vectors.

The helo was vectored 180/78. In view of the distance, the pilot of 401 requested all units to close at best speed. The helicopter reached low fuel state in a short time and went single engine (max range). Another helicopter was vectored to intercept 401 and joined up 63 miles out.

When 401's fuel dropped below 350 pounds, the HAC prepared for a water landing. However, by this time they were only 28 miles from their ship and the HAC restarted the secured engine. Moments later a small foreign ship was seen and closed on by 401. As the helicopter approached, the ship turned into the wind and announced an available deck. The HAC of 401 landed successfully – with 100 pounds on the gages.

After a thorough inspection and no discrepancies found, the crew spent the night, refueled, and flew back to their own ship the next day. In case you may wonder about the weather, it was clear, visibility all the way to the horizon, temperature was 81, dew-point 70, winds were east at 30 with gusts, and the seas were rough with 10- to 12-foot swells.

There was a little error in the helo's navigation. There was a little error in the difference between forecast and actual winds. There was a little delay in radar vectoring. There was a little error in the vectors. The pilot delayed in an area search for the ship and further delayed before going single engine.

The pilot's thorough knowledge of NATOPS and the corrective action taken, once the critical fuel state was recognized, saved the entire crew from getting wet. It was no mean feat of airmanship when the HAC successfully landed the SH-3 on the foreign ship, under poor sea/wind conditions. He prevented a ditching at sea and probable loss of the aircraft.

See and Be Seen. The military helo was on an IFR flight plan, cruising along at East Coast Center's assigned altitude of 3000 feet MSL, on airways, headed west. The civilian, light airplane was headed east at the same altitude on a "flying farmer's" flight plan (unfiled). Both aircraft were in straight and level flight; both unknowing of each other's position.

The HAC sighted the fixed-wing only 5-10 seconds prior to the very "probable" midair. Had he not spotted him and taken evasive action, down and to the right, it would have been a certain crash. As he made his move, the light airplane driver also went down and to *his* right, narrowly missing each other in the process.

Another case of "a miss is as good as a mile"? There is no doubt the skies are getting more crowded each day, particularly as the weather gets better. It seems to bring out the "seagulls" (both military and nonmilitary alike); the ones that have been confined to "hangar flying" for the past several months. So, pilots, even though you are operating under IFR in VMC, as assigned by Center, this doesn't guarantee that another "unwanted" pilot is not going to try to occupy

the same place at the same time. Keep your eyes moving at all times, as did the crew of this helo. It prevented a mishap.

There are many "Sunday fliers" in the skies these days, and many do not file flight plans. The next time you find yourself in VMC, regardless of whether you're under IFR or VFR, use extreme caution and avoid those UFOs (unfiled flying objects). The "see-and-be-seen" rule still is in existence, whether we want it or not.

• *It doesn't happen only to helo drivers. While the above mishap was on the press table, another incident involving a jet jockey and another light, civilian airplane occurred on the west coast. No one is exempt from possible midairs.*

While descending under IFR in IMC, breaking out of the soup into VMC at 3700 feet, the tactical jet narrowly missed the unfiled light plane going in the opposite direction. The jet was given traffic advisories of the closing traffic, but its altitude was unknown. Fortunately, the jet jockey was late in continuing his descent and consequently avoided the probable midair by 200 to 300 feet! Had the jet been on the proper profile . . . Once again, see and be seen.

It's What? Two pilots manned their E-2 for a local flight and, immediately after takeoff, noticed that the port reduction gear oil pressure was fluctuating. They stopped their climb, broadcast the problem, and returned for an uneventful landing.

Troubleshooters checked the port engine and found that it was *25 quarts low*. There was no evidence of leakage or excessive consumption. However, it came to light that improper postflight inspections were being pulled and postflight MRCs were not being followed. Bad news!

Thumbs Up? One of the most common hand signals can also be the easiest to misunderstand. Case in point: After turnup and final check, a T-2 pilot had UHF radio problems. A troubleshooter opened the equipment bay door latches and informed the pilot he would need to get another radio. After waiting awhile, the pilot decided to take the *Buckeye* without getting a new radio. Neither he nor the final checker were aware of the nonsecure equipment door. The pilot and the final checker exchanged *thumbs-ups*, and the T-2 left the line area without another check. On takeoff, the windstream ripped off the unsecured panel.

What more can one say? Just another case of, "I thought the other guy . . . etc." Although the pilot erred by not knowing what the troubleshooter was actually doing, what was the purpose of the final checker? It takes teamwork to make safety work at its most efficient pace, and someone on this particular team obviously lost his playbook. Don't lose track of yours. Next time, it may be more than a panel that's lost.

Ah, Oh, Unh, *@&'*. The crew of a CH-53D had just externally hooked a 6 x 6 truck, and lifted off to go from point A to point B. It was a hot day (little lift available) and the helo was not quite max gross when it became airborne. With the truck hanging almost motionless, the pilot started to pick up some airspeed as he continued to climb.

It was necessary to climb to about 60 feet to ensure the truck would clear some telephone lines at the edge of the landing zone. At about 20 knots, the helo yawed right and began to settle. The truck hit four telephone wires and the tension on the wires, before they snapped, pulled a telephone pole over about 45 degrees.

The pilot told the crew chief not to jettison the truck, and was able to put it back on the ground upright. The helo had entered power settling when the pilot lifted out of ground effect without translational lift to compensate. It was pretty obvious the pilot hadn't figured his power required against what was available. It's necessary for all pilots to be aware of their power requirements when performing at or near max gross. It was never more true! ◄

PQS management problems?

By RMCS(SS) R. Hillman
Special Projects
PQS DEVGRU, San Diego

ARE you having problems with PQS (Personnel Qualification Standards)? The following are common questions among the fleet:

- Can a PQS package be tailored to my unit's needs? If so, how do I tailor it?
- How many points should I require my trainees to complete during a given period of time?
- What should I do to my PQS package in the event of airframe changes or a transition which changes or invalidates it?
- What publications and directives give me guidance for PQS matters?

All these questions have been asked by those who have managed PQS. PQS is part of your unit's training program. If you find yourself asking these questions 2 weeks prior to a command inspection, it is probably too late. PQS management takes insight, solid planning, and common sense.

When you institute a new package, you must tailor it to meet your own unit's particular needs. When a package is developed, it is often written to cover a large number of aircraft models, usually of the same type, and there are bound to be some differences due to airframe changes, mission configurations, etc.

If you have a transition to a late-model aircraft, your training program will require a similar transition to reflect the various equipment and system changes. Ensure your PQS is properly updated (tailored). If changes are complex and extensive, it might be necessary to request that a new PQS be developed or existing PQS be updated or revised by the PQS Development Group. If this is the case, a request should be submitted via your chain of command so the type commander can decide what should be done and how it will impact on other units of your type. (See your type commander directives 3500 Series.)

Points are often a misunderstood subject. Point values are assigned to items during a PQS workshop, by subject matter experts, as the final step in developing a standard. The point value given to items will vary from standard to standard because each standard is developed by a different group of subject matter experts.

Ideally, the points allocated to each item are in proportion to the amount of effort the trainee must expend and/or the significance or criticality of the knowledge or skill required. Unfortunately, the probability that the points actually reflect that effort is very low; therefore, they should be used only as a very rough guide. Recently developed aviation PQS have a single point system where one point is awarded for each Fundamental, System, and Maintenance Action Task completed.

Points can be used as a management gage. By comparing the points attained during a specified period of time with the total required for qualification, both the trainee and the division training supervisor can quickly and easily estimate the trainee's progress toward qualification. Management should keep in mind that there will be valid reasons for differences between the performance of individuals and groups. When the supervisor is determining how many points to assign, factors such as workload, unit's schedule, and time available for training should be kept in mind. Assigning a specific number of points for all ratings per week is not recommended, since there is a significant variation in the efforts required to attain points from rating to rating.

The number of times required to perform a particular task is based upon what is thought to be the "minimum" number of times needed for the average trainee. It might be necessary to require some personnel to perform the task a different number of times than that suggested by the standard. Knowing your people should give you the proper insight for making this decision.

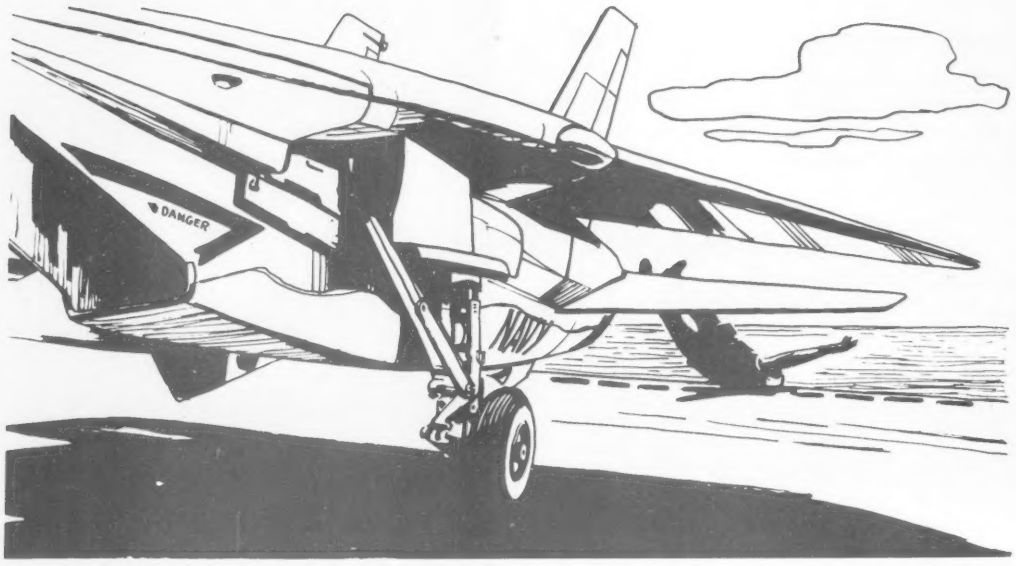
PQS software consists of the PQS Standards, Qualification Cards, Progress Charts, and the Implementation Manual (NAVEDTRA 43100.1). Available PQS Standards and Qualification Cards are listed in NAVSUP 2002 card No. 0006. The Progress Chart (S/N-0115-LF-015-0005)

can be obtained at your local SERVMART. The Implementation Manual may be ordered through normal supply channels.

Your type commander and wing commander issue directives in the 3500 Series which outline their policies and special requirements for managing PQS. These directives should be consulted to ensure your command meets all the requirements of your type and wing commander. Your unit should also have a local PQS directive to give precise guidance and policy of your own unit's training program.

For assistance in PQS matters, consult your type commander's and wing commander's directives which contain a listing of assigned PQS Assistance Teams. The PQS Development Group, San Diego, is also available to answer any questions that might arise (Autovon 957-5367).

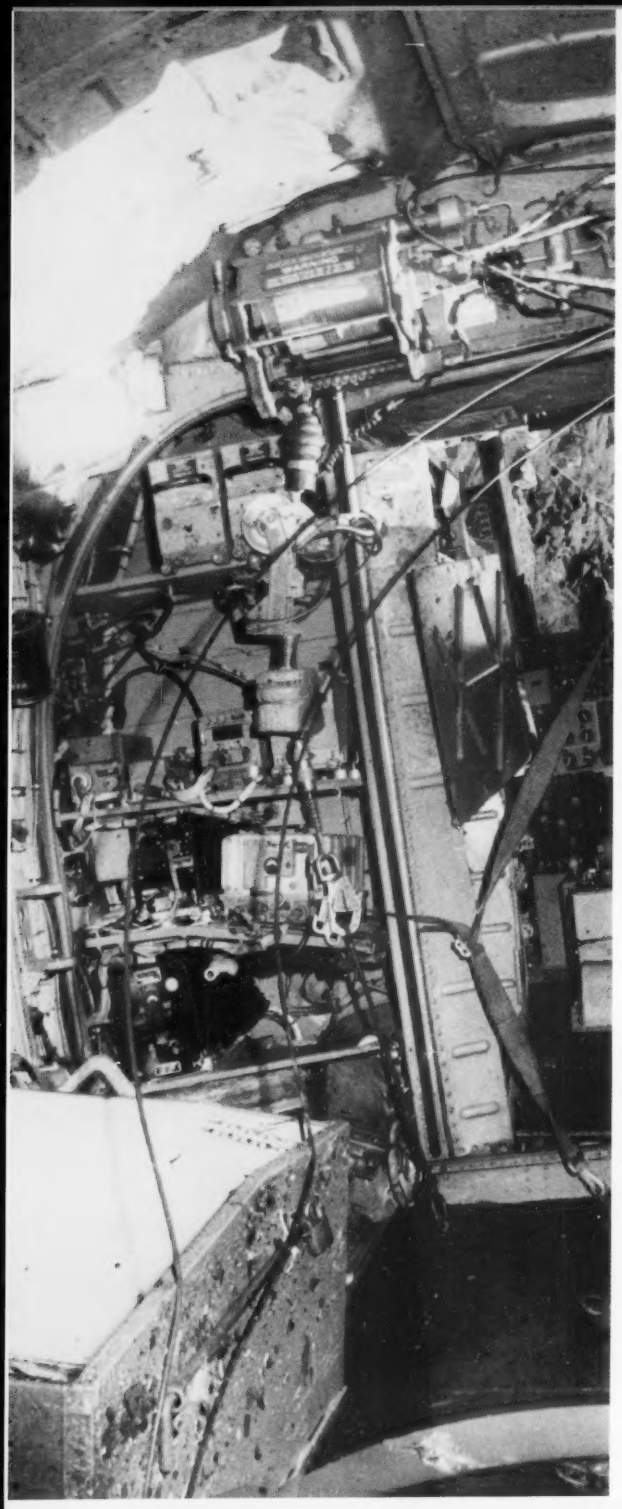
• *While not directly associated with safety, a good PQS training program can help provide the foundation of knowledge needed for a truly effective safety program. Safety awareness is meaningless unless personnel have a good knowledge of proper procedures. – Ed.*



Lucky

THREE F-14s were spotted on elevator No. 4. A call to launch was passed over the 5MC, and all aircraft were started. The second F-14 began to taxi, after No. 1 had cleared the spot, and, as a port turn was begun, the exhaust blast of the second aircraft knocked down a flight deck crewman who was stowing electrical cable near the deck edge. The blast blew the crewman over the side, after he struck the gear locker forward of the LSO net. Fortunately, the plane guard helo was on the scene in 2 minutes, made a quick pickup, and the crewman was back on deck a few minutes later. The crewman suffered a fractured left wrist, caused by his contact with the gear locker, but is not expected to incur any permanent disability. He will be on light duty for 4 or 5 weeks.

Power required
exceeded
power available



TWO pilots and a crew chief manned their H-46 for a flight from Homeplate to a distant island, with an en route stop for fuel. They were to be a detachment to provide logistics support and emergency medical transportation. When they departed Homeplate at 0715, they had a load of passengers to take to the detachment base. The flight was routine through their refueling stop and on to their destination.

After reaching their destination at 1000, the HAC talked to the pilot of the helicopter he was relieving. Their conversation included a discussion of weight and balance, density altitude, power required against power available for HIGE/HOGE and, briefly, general operating procedures at the detachment site. The HAC then headed for lunch.

The crew chief remained at the aircraft to complete servicing for an afternoon flight. After lunch, the pilot filed a DD-175 for a local bounce and area FAM flight. They launched at 1220 and conducted touch-and-go landings for about 25 minutes. They were operating at high altitude, for the first time in a long time, and wanted to get the "feel" of things. In addition to the three crewmen, they had two passengers along.

Satisfied that they were acclimated, they then departed the field to look over the general area, which included two volcanic mountains. They began to climb while circling one of the mountains. The HAC questioned the crew chief about the possibility of hypoxia occurring to anyone onboard. They were flying at 11,000 feet.

After completing the circuit around the first mountain, the HAC flew toward the second mountain. The crew saw a fairly flat area at 11,500 feet, made a slow pass over the area, and executed a 360 over the spot on which they intended to land. Prior to their departure, the copilot figured that power available was sufficient to make a landing using a density altitude of 12,000 feet and an OAT of 10°C. The HAC, having already conducted a power check, decided a landing could be safely conducted. The density altitude was 12,600 feet.

On final, the HAC requested the copilot select *hover aft* mode and complete the landing checklist. The final

As indicated in the photographs, not much was left of the H-46. The crew and passengers were lucky to escape with only minor injuries.

approach heading was 090 into a 10-knot wind. This course was slightly downslope. They had determined that a waveoff straight ahead would be flown if necessary. The HAC eased into a hover (15 feet AGL) just a tad forward of the landing zone. The crew chief requested that he back up about 10 feet for positioning.

While maneuvering, both pilots heard the N_r decay. The HAC waved off by lowering the collective and easing forward cyclic. He glanced at the airspeed and saw 40 knots. The crew chief thought they had lost an engine. The copilot saw the N_r at 88 percent and made an unsuccessful attempt to start the APU. The N_r continued to decay, but their airspeed had increased to 65 knots.

Directly in front of them was a 10-foot pile of volcanic rock, which the HAC climbed over by using cyclic only. Further downslope was another 10-foot pile of rock. Again, the HAC avoided colliding with them, but his luck was running out. Another rock pile appeared and, by now, the HAC was running out of everything – altitude, airspeed, N_r, and ideas. The right main landing gear hooked a rock and the flight was over.

The belly of the helicopter dragged across some rocks, the aft section hit the ground, and the H-46 rolled over on its left side. A fire broke out and ultimately burned out the aft cabin.

The crew chief was wearing a gunner's belt, and the two passengers had on seatbelts. In spite of these restraints, they were all thrown into the radio closet area. They helped each other out and all exited the helo through the upper crew door above them.

The HAC unstrapped and got out through the right pilot's escape hatch. The copilot was pinned by a collapsed instrument panel and his seat, which came off the track. Also, the copilot's flight suit zippers were open and hung up in numerous places on the aircraft while he was struggling to get out. Despite these problems, and with the HAC's help (the HAC grabbed the copilot by the torso and bodily pulled him up), the copilot escaped through the pilot's hatch. The time was 1350.

The copilot had broken his arm in the crash and was placed on some inflated LPAs. The HAC activated two PRC-90s on beacon and attempted to use another one on voice. A C-130 passed overhead, homing in on the emergency signal, but the survivors were unable to establish voice contact. However, in 30 mintues another helicopter landed and offloaded two paramedics. After the survivors had been treated, they were airlifted to the 9500-foot level, transferred to another helo, flown down the mountain to a waiting ambulance, and taken to a dispensary.

Several facts surfaced as a result of this senseless accident:

- The HAC violated NATOPS by flying above 10,000 feet without oxygen.
- No weight and balance form had been filled out prior to the FAM flight.
- The two passengers onboard had not been manifested.
- The squadron had no training syllabus for high-altitude operations, and pilots were not even subject to a skull session before deployment.
- The OIC of the detachment was an 02, with little more experience than the pilots.
- The HAC and copilot were given only a cursory briefing and were permitted to fly without taking the time to read pilot folders, general course rules, or area SOP, and were not exposed to a high-altitude environment before they launched.
- The HAC violated NATOPS by using the *hover aft* mode above 6000 feet.
- The HAC violated local rules by attempting a landing above 10,000 feet, in an unauthorized zone.
- Both pilots miscalculated the power requirements prior to the attempted landing, and the HAC erred in judgment by establishing a 15-foot hover when all power calculations are based on a 5-foot wheel height.

It is evident that the attitude within the squadron, toward the detachment, was a casual one. There was too little supervision. The bottom line, however, was pilot error. The pilot was on an area familiarization flight, had no reason to attempt a landing and, when he did, he couldn't hack it. ◄

Outstanding Performance of Duty

AME2 Michael S. Ellis of Reconnaissance Attack Squadron TWELVE was performing a daily inspection on an RA-5C aircraft, which required that the LOX converters be changed. While replacing one converter, a coupling separated, which allowed a steady stream of liquid oxygen to spray the nose wheelwell.

Since maintenance involving hydraulic fluid was being conducted on the *Vigilante,* Petty Officer Ellis recognized that a potentially disastrous situation was developing. With total disregard for his personal safety, he quickly removed the damaged converter to a safety area designated for LOX equipment. In the process of removing the converter, Petty Officer Ellis received second-degree burns to his right hand.

His calm and professional reaction to an extremely dangerous situation averted possible injuries to several squadron personnel and damage to a valuable aircraft. The total dedication to duty and genuine concern for others displayed by Petty Officer Ellis is indicative of a true professional. This performance of duty rates a well deserved Attaboy!

ORIENTAL GAS SHORTAGE

THE first leg of the flight of four CH-46s from MCAS(H) Futema to NAF Atsugi went according to plan. The second leg, however, went slightly amuck and terminated (temporarily) at a destination other than that intended.

The flight leader estimated that the second leg from Kanoya JMSDFAB to MCAS Iwakuni would take 1 hour and 40 minutes, if the forecast held up. Weather was to be 3000 scattered, 3-5 miles in haze, with winds out of the northwest at 10. The decision *not* to fuel the internal extended range tanks was made. During the first 110 miles of the second leg, the winds were slightly stronger than forecast, but still within the limits for safely completing the flight. The hitch came during the last 75 miles of the route, as it was over water and the weather forced the flight down to 1500 feet in order to remain VFR. Unknown to the flight of *Sea Knights,* the winds had increased to 30 knots off the port quarter. This, coupled with no available navaids, blew the flight some 20 miles off course, to the east. By the time the flight determined their actual position, two of the four helicopters were becoming *critically low* on fuel. The flight was only 10-15 miles from Iwakuni, yet the pilots had to choose between embarrassment and a possible accident. The former choice was wisely made, and the flight landed on an inhabited Japanese island, approximately 13 miles from Iwakuni. The aircraft were refueled and departed for their destination. They arrived a bit later than planned, but safely.

A similar decision, involving a crew of another CH-46 on the west coast, a short time prior to this incident, turned out likewise. Decisions like these are to be commended. However, maybe the embarrassment vs accident decisions of this nature can be averted if pilots utilize all the available aircraft systems. In the case of the four *Sea Knights,* filling the internal tanks would not have adversely affected their performance. Other aircraft can be looked upon in a similar vein. If there is any doubt about the weather en route or the familiarity of the terrain, prudence would dictate additional fuel. Pilots – don't get caught short on fuel if you have the choice. The lines may be a little longer at the "pumps," but not as long as some of the rice paddy roads in the Orient! ◄

Getting the word out

One often reads or hears about jet pilots ejecting from the front line fighters of today's supersonic and near-supersonic air armada because of the pilot's or aircraft's inability to get out of an intentional or unintentional spin. However, on rare occasions, there are mishaps when aviators still have to manually bail out because they cannot get out of what they have gotten themselves into. Such was the case of the T-34 pilots who ended up in a fully developed spin, were unable to get themselves out of the maneuver, and consequently had to bail out, because they – "DIDN'T GET THE WORD!"

THE flight of the *Turbo-Mentor* was scheduled to be a routine PA-1 (precision acrobatic) flight for the IP in the rear seat and the SNA in the front seat. The pilot at the controls for the most part was to be the student – at least it was planned that way. The brief, preflight, start, taxi, takeoff, and flight to the southern operating area went according to NATOPS and unit SOP. After both pilots performed a series of wingovers, loops, and a split-S, the IP set up the aircraft for a progressive spin at about 9000 feet. He entered a right normal spin and, after approximately two turns, the IP applied procedures to induce a progressive spin to the left. Full back stick and opposite rudder were applied, but the T-34C continued to spin to the right. Realizing that something was not "feeling" right, and being somewhat apprehensive, the IP gave up the thought of the progressive spin and initiated the published NATOPS procedures to get out of a normal spin. At this particular time, the SNA commenced judicious use of the duty barf bag. The aircraft continued to spin towards the beach below, despite any and all efforts by the IP to rectify the situation.

Approaching 5000 feet, the now "along for the ride" T-34C crew decided to abandon the earthbound *Turbo-Mentor* and go over the side. Bailout procedures went without any major hindrances, and the pilots were in good chutes shortly after leaving the still spinning aircraft. Both pilots landed in the water, along with their pilotless trainer, several hundred feet from the beach. The duty SAR helo quickly picked up the pilots and returned them to base, where they were medically checked and returned to full duty in a short time. The T-34C, still in fairly good shape after alighting in a flat attitude, received ALFA damage, and was recovered by the salvage crew.

Why didn't or wouldn't the T-34C come out of the spin? An aircraft as basic as that, you would think, would fly itself out. Right? However, the T-34C's flight characteristics are not exactly like those of its predecessor, the T-34B. Did these and other pilots know about the differences? There was much conjecture as to why it remained in uncontrolled flight, and some pretty concrete speculation, too. The IP stated that the first two turns of the original spin were normal, and that he wanted the SNA to watch the aircraft make about two more turns before demonstrating the progressive spin techniques.

As they went through four or five "normal" turns, nothing happened when progressive inducements were applied. The T-34C continued spinning to the right! The IP, feeling that something was wrong, gave up his progressive spin attempts and concentrated on getting out of the now "fully developed" normal spin. It was about then that he realized that the aircraft was in a much flatter attitude than normal. The ball was fluctuating around the center of the needle-ball indicator as the aircraft passed through 6500 feet, still in the flat spin to the right. Rudder was neutralized and the stick began to creep aft. A positive motion was required to neutralize the control stick, but *no pressure* was needed to hold the rudders in neutral! The feeling was much like applying pressure without any airloads against them. Things were just not feeling right!

As a *last ditch maneuver*, the IP "wiped out" the cockpit in an attempt to get the *Turbo-Mentor* to do something other than what it was doing. This procedure also had no effect on the spinning aircraft. Going "along for the ride" any further was not in the best interests of the IP and SNA, so, approaching 5000 feet, they wisely executed NATOPS bailout procedures.

Did the IP allow sufficient time for the aircraft to respond to the progressive inducements in the first place? Then, when he realized that things were not just right, did he allow enough time to recover from the original spin? Or was it because he lacked the requisite knowledge of minor, inadvertent deviations from prescribed procedures? Then again, "wiping out" the cockpit can destroy all pro-recovery inputs, making the T-34C impossible to get out of the normal spin. All, or part, could have played a role in the demise of the *Turbo-Mentor*. It is apparent that the pilot tried several techniques – some established, some improvised – and that time was not on his side.

What were the answers, then? It is *normal* for *some* aircraft *not* to reverse direction in a progressive spin, and "wiping out" the cockpit can hinder recovery in certain cases. The spin definitely was fully developed, and recovery time was prolonged, so the pilots did the only thing that was available to them – bail out! Did they follow NATOPS? Yes. The only *published* techniques available.

Existing information on the spin characteristics of the T-34C and proper spin recovery techniques had not been published at the time of the accident, but was disseminated shortly afterwards. The failure to promptly disseminate this information was considered the cause of this accident. ◄

Don't put off for tomorrow what you can do today, because if you enjoy it today you can do it again tomorrow.

James A. Michener

HERCULEAN SNOW

THE record snowfalls in the Great Lakes region during the winter of '78-79 will surely be remembered by all that worked, lived, or visited in that area last season. Of particular note was the Navy crew that departed NAS Great Lakes for NAS Testo-testo, with two en route stops, shortly after the first of the new year.

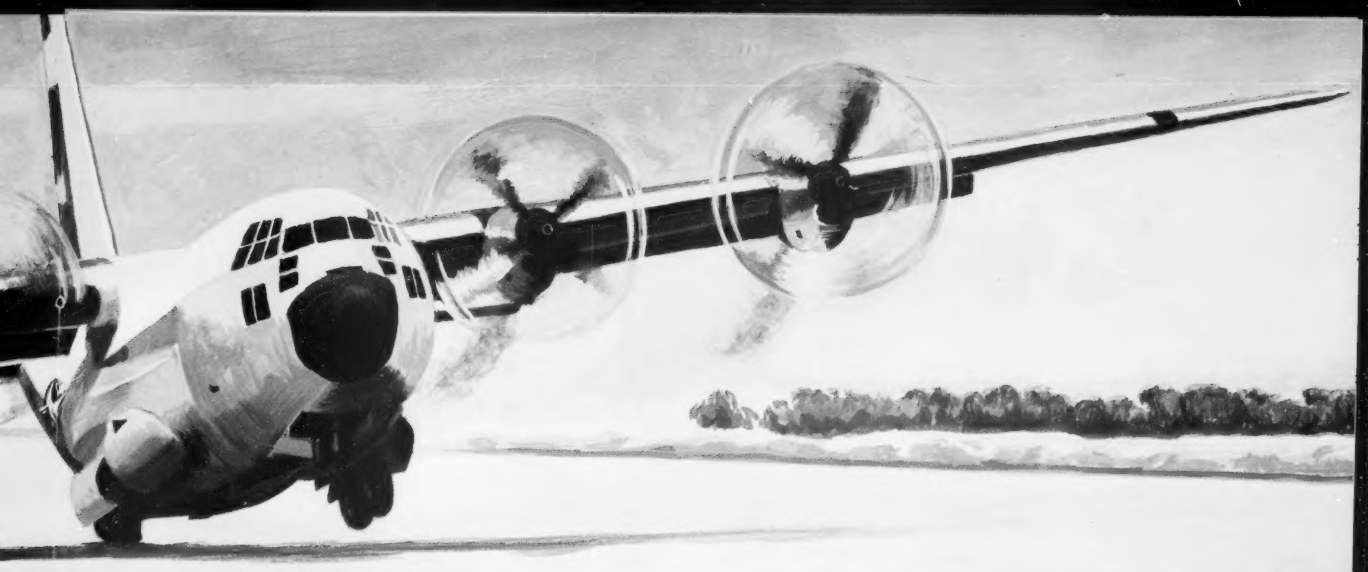
The C-130 departed early one afternoon. The first en route stop was without incident, as was the flight to the second stopover point – that was, until the time of touchdown. The reported weather was 4500 overcast, 10 miles visibility, with winds out of the northwest at 11 knots. (Although not reported earlier, tower reported gusts up to 19 knots at the time of the incident.) The crosswind component for the *Hercules* was from 80 degrees port. No particular problem for the normal -130 approach, as it can take 22 knots at 90 degrees. However, the runway was not *normal* this day. It had snowed the evening before, and there was one-eighth to three-quarters of an inch of packed ice and snow on the now-sanded duty northeast runway. This environment, coupled with the relatively inexperienced (in-type) aircraft commander, eventually put the aircraft in and out of the adjacent snowbank!

On short final to the northeast runway, the aircraft commander asked for and received 100 percent flaps at the threshold. He slowed to the prebriefed speed of 100 knots. No abnormal crosswinds were experienced at that time. The *Hercules* touched down 2000 feet down the "useable" portion of the runway, at 85-90 knots. All power levers were placed in ground idle. Immediately following this action, the port wing began to rise. The pilot tried to combat this lifting with cross-controls, but the aircraft continued to drift to the right. Differential power was used. Number 1 and 2 props were placed in reverse; No. 3 and 4 engines were increased from ground idle, yet were still in ground range. Despite all this, the left wing continued to rise. All efforts to return the left wing to the centerline were in vain. About two-thirds of the way down the runway, the No. 4 prop dug into the ice/snow-packed runway, as the plane continued its left-wing-high attitude. Eventually, the right wing struck the 5-foot-high snowbank at the edge of the uncleared portion of the runway.

The No. 4 prop departed the engine, along with its accompanying gearbox. Ensuing shrapnel penetrated the No. 3 engine nacelle and aircraft fuselage. An aft observer reported a fire in No. 4 engine! The cockpit crew simultaneously saw the firewarning light and heard the accompanying horn! After a couple of attempts, the engine was secured and the firewarning extinguished. The rollout continued with the remaining three engines in reverse. This action, coupled with judicious use of brakes and nosewheel steering, brought the errant C-130 under control, with 1000 feet of runway remaining. The engines were secured and the crew egressed without further incident. The turboprop snowmobile was finally at rest.

Several cause factors were assigned in this mishap. While none were individually the direct cause, each one compounded the pilot's problems to the point where the inevitable occurred. Contributing cause factors were as follows:

- Wrong airspeeds utilized for approach and touchdown.
- Inadequate preparation by the flightcrew for a cross-



...WMOBILE

wind landing on a known slippery runway.

- Execution of the landing rollout with max flaps selected.
- Wind gusts that were not anticipated by either the pilot or the tower.
- Disorientation by the pilot with respect to centerline position on rollout.
- Pilot's unfamiliarity with the characteristic of the C-130 for the upwind wing to raise in crosswinds, as amplified by reverse thrust and flap position.

This particular winter was his first real exposure to snow and ice operations in the C-130 since leaving coastal California. His first three landings on snow- and ice-covered runways during the previous 48 hours, however, were without incident. A false sense of security or complacency may have also contributed to this mishap.

One could say that "things" were set up for this mishap to happen. The wind and runway conditions were not ideal. The pilot, although fully qualified in model according to training records, only had about 7 of his 370 hours in-type as first pilot. He was clearly not ready to land his machine. His expertise was normally geared to low-wing turboprops. The high-wing *Hercules* proved to be a bit different, under conditions that he had previously encountered in *Orions*.

One thing is clear – mishaps of this nature must be prevented. NATOPS is the viable means to do so. Correcting the following should help:

- Landing speeds were low. The placard in the aircraft was misinterpreted by the crew. Selected touchdown speed was 83 knots (stall speed for the respective flap setting). Threshold and touchdown speed should have been 115 and 100 knots respectively. The crew's calculation did not allow them to establish control of the aircraft immediately following touchdown.
- Landing briefings were limited to braking effectiveness on icy runways, but no crosswind techniques were discussed prior to approach or landing.
- No maximum crosswind landing chart was available to the crew. (It has since been added to EC-130 G/Q NATOPS manuals only.)
- Physical evidence indicated that sliding and centerline deviation were not perceived by the crew (understandable to some extent due to the narrow runway, lack of depth perception caused by the snow, and no centerline markings).
- The upwind wing has a marked tendency to lift even further when applying reverse thrust with 100 percent flaps selected. Selection of a lesser flaps setting would have most likely eliminated or significantly reduced the wing-raising characteristics.

This mishap could have been a major disaster, but the crew got it all back together in time by executing the prescribed NATOPS procedures. They were able to get the *Hercules* back under control before further damage could occur. Once again, it pays to follow NATOPS. If necessary procedures do not exist, notify the model manager and let them initiate the procedures. Above all, don't assume anything. Cover every possible situation in the briefs, not after the fact!

there must be a BETTER WAY

By LCDR John Ogle, USN

YESTERDAY my *Hawkeye* crew and I, along with two *Corsair* pilots, came within milliseconds of becoming statistics, as a result of a near midair. I'm certain most of us have had near-misses, but, personally, I have never had one so close, and fervently hope to never have another. With this in mind, I would like to explain the details of this incident and offer some of my thoughts for consideration.

Our crew briefed at 1515 and determined, from the teletype data, that our departure would be Case II, climbout radial 315 degrees. Weather was about 2500 feet scattered to broken, and visibility, above and below the cloud deck, in excess of 10 miles. On launch, we monitored both buttons 14 and 15, in order to paint a little better picture of the CV airspace in our mind's eye. After the cat shot, I remained at 500 feet, turned right on the 7-mile arc, and intersected our climb radial. At 14 miles, I began my climb to 26,000 feet. Passing 12,000 feet, and well above the cloud layer, I turned to a heading of 303 degrees, proceeding to station. Only a few seconds had passed when my copilot, to understate his reaction, alerted me to the crossing section of A-7s. Simultaneously, I felt the buffet of jet wash. The two *Corsairs* had passed from under our nose, at 10 o'clock, to aft of our starboard

wing, at 4 o'clock, at our altitude, in approximately a 25-degree port turn. The following 5 minutes were spent trying to determine just how close we had come to them. Our determination was within 100 feet.

After the fact, I asked Departure Control to confirm that our departure was Case II. I was informed our departure had been changed to Case I – I didn't get the word. This should not have had a bearing on the incident, because both Case I and Case II departures are essentially VMC when VMC conditions exist, as they did in this case. Back on deck, I learned these additional facts:

- The A-7 pilots had been on their assigned departure radial during rendezvous and, according to their instruments, the near-miss happened on the 325-degree radial.
- The possibility of an error with my aircraft's TACAN existed. During our later approach, we had intermittent TACAN azimuth indications.

Often, I have seen near-miss reports degenerate into "who-done-it" contests. There is no firm answer to our case's question – who was wrong? A-7 pilots are just as skilled as I, so why did this happen? Had a collision occurred, an accident board would have spent considerable time attempting to answer that question. Perhaps they would have pointed out the following:

- Recently, the ship's TACAN has been in questionable status. Could this have been the problem?

- The E-2C has a radar capable of determining extremely accurate aircraft positions and altitudes. Why didn't the E-2 CIC crew alert the "front end" to the traffic? Answer: The E-2's radar and IFF cannot see accurately within 10 miles of the aircraft.
- Possibly, the E-2 pilots were occupied "in the cockpit." Why were they not more heads-up? Answer: Both of us were looking for traffic. The A-7s approached from under our nose, another blind spot for an aircraft with already poor cockpit visibility.
- All CVW aircraft are equipped with IFF and Mode C altitude readout. This CV is equipped with millions of dollars worth of radars, radios, and highly-skilled air controllers. Why were the crews involved not alerted to traffic? Yes, this is a loaded question, but it offers food for thought. During any given Case I launch/recovery evolution, there may be as many as 35 aircraft within 30 miles of the carrier. They usually do not even get advisory control, except from the tower when descending into the landing pattern. No civil airfield, handling high-speed jet traffic, would ever consider operating this way (I hope).

Perhaps I demonstrate too much self-concern, for I know the history of midairs involving E-2s does not allow the E-2 crew much chance for survival. We have no ejection system. All things considered – **there must be a better way.**

Airfield Profile No. 9:

NAS North Island (NZY)

By Art Adams, ATCF Division
NAS North Island

WELCOME to San Diego, California, where the mountains meet the sea, and to NAS North Island, the birthplace of naval aviation. In 1911 LT Theodore G. Ellyson became the first naval officer to undergo flight training at the Curtiss Aviation Camp, located on North Island. North Island has been serving the Fleet since 1917 when it was first commissioned as a naval air station. Today NAS North Island is the home for Pacific Fleet antisubmarine squadrons (fixed-wing and helicopters), utility transport squadrons, a U.S. Customs Support Branch, and a Navy Flying Club. In addition, 92 nonflying tenant commands, including two major staff commands, COMNAVAIRPAC and COMASWWINGPAC, call NAS North Island home. Three aircraft carriers (USS RANGER, USS KITTY HAWK, and USS CONSTELLATION) are also homeported here.

Air Traffic Control Procedures. San Diego Approach Control controls arrivals and departures at North Island. All military aircraft except helicopters *must* use an instrument approach or radar vector to the airport. You can request a TACAN, GCA, visual, or VFR approach. We also have circling approaches from ILS and LOC approaches into San Diego International Airport (Lindbergh Field), 2 miles to the north. If you request a PAR or ASR approach, GCA will normally assume control when you are about 10 miles south or southeast of NZY. NZY is still operating from a GCA trailer, but expects to have a RATCF by the winter of 1980.

If you are arriving from the east, you normally are given an en route descent. Because of the mountains to the east (6500 feet high, 40 miles east), Approach Control will descend you in steps as you proceed westbound. If it is IFR and you request a GCA, San Diego Approach will normally switch you to GCA 10 to 14 miles out, descending to 3000 feet for a modified straight-in approach to Runway 29. Some pilots complain about this approach because aircraft are sometimes too high or too fast for the pilot to transition to landing configuration and approach speed in time to make a comfortable approach. It is recommended that reduced airspeed be used during the final stages of the en route descent, especially if North Island is IFR.

Service Facilities. NAS North Island is open 24 hours a day, but prior permission is required if you plan to arrive between 2300 and 0700. Limited transient maintenance is available between 0700 and 1530 on weekdays only. Some refueling delays may be expected because of only one hot refueling pit. Most transient aircraft are refueled by truck. Complete weather service is provided, including METRO on 344.6 MHz. Base Ops frequency is 355.5 MHz, located in Flight Clearance, and can be used to coordinate VIP arrivals, requests for service, etc. NAS North Island is an Aerodrome of Entry, with agricultural and customs inspectors available upon request for flights arriving from outside CONUS.

Aircrew Facilities. A limited amount of lodging is available at North Island, but there are 13 motels in Coronado, just outside the gate. Numerous motels/hotels are available in San Diego. Reservations in all cases are encouraged. Government transportation is available to Coronado but not to San Diego (except for ferry crews). An air terminal cafeteria, located near Base Ops, is open 24 hours a day, except for short periods when it is closed for cleanup. The O' club is closed all day Monday and on Tuesday night. Lunch is served Tuesday through Friday, and dinner is served Wednesday through Sunday. Enlisted messes are also available.

The Airfield. NAS North Island has many air traffic restrictions and noise abatement procedures because of its location. The city of Coronado abuts the east boundary of the air station. Two-and-a-half miles northeast is downtown San Diego. Two miles north is San Diego International Airport (Lindbergh Field). One-and-a-half miles west is Point Loma, with obstructions to 497 feet MSL. These surroundings, the runway layout, and the prevailing wind (from 310 degrees) dictate our traffic patterns. Continued

GCA approach to Runway 29, 2 miles from touchdown.

Runways. Runway 29 is our primary instrument runway and is equipped with high-intensity approach lights and centerline lighting. It is 7500 feet long and 300 feet wide. That's a lot shorter than many of you may be used to, and the 300-foot width makes it look even shorter.

Runway 18, 8000 feet long and 200 feet wide, is the primary departure runway (for transient aircraft), as departures can climb straight out over the ocean. What's that? The Pacific Ocean to the south! You better believe it. Some pilots have called the tower "8 miles west" when they were south. Locally based S-3s usually depart on Runway 29, but the S-3 is a quiet aircraft, and pilots can make the sharp left turn to the south without flying over Point Loma, a local "no-no."

Runway 36 is used for landings during noise abatement hours, i.e., all weekends and after 2200 on weeknights. Carrier breaks are allowed to Runways 36 and 29, but the Runway 36 break is a RIGHT break to avoid flying over Point Loma. Break altitudes are 2000 feet for turbojets (except S-3s) and 1500 feet for props, turboprops, and S-3s. You must descend to 1000 feet for the downwind.

During normal operations, arrivals use Runway 29 and departures use Runway 18. Locals call this "cross course operations" (sequential departures between arrivals). When landing on Runway 29, don't turn off at the intersection without tower clearance, as you will probably delay a Runway 18 departure. If you roll through the intersection (most jets will), be alert taxiing back. You must have tower clearance to cross Runway 18.

Special Precautions. Arrivals to Runway 29, both VFR and IFR, create serious noise problems. The extended runway centerline passes directly over the multimillion-dollar high-rise Coronado Shores Apartments, 1.5 to 1.8 miles from threshold, and the Hotel Del Coronado, 1.4 miles from threshold. Because of this, we have the following noise abatement restrictions which also appear in the FLIP AP/1:

- Only two threshold crossings permitted on Runway 29; the second one must be a full stop.
- Section instrument approaches by transient jets are not authorized to Runway 29.
- No flights authorized below 2500 feet over the city of Coronado (east of airport) or Point Loma.
- Fly south of the high-rise apartments and the Hotel Del Coronado 2 miles east of the airport.
- When the weather is 1000 and 3 or better, the PAR final approach to Runway 29 is offset 8 degrees clockwise.

The offset PAR final approach, to the left of the normal centerline, is used for noise abatement, as it passes approximately 1000 feet south of the hotel and the high-rise apartments. During the approach, the PAR controller will instruct you to take over visually 1 mile from touchdown and make your own correction to the centerline. (Locally based aircraft use the offset approach when the weather is 500 and 1 or better.)

Runway 18 is used for landings when there are strong southerly winds. The proximity of Lindbergh Field dictates that all fixed-wing approaches, other than VFR approaches, be separated from Lindbergh traffic. When weather permits, request a VFR approach and "cancel IFR" with Approach Control prior to switching to Tower (about 6 miles out). Aircraft should cross the strand (coastline) about 4 miles east and fly over the bay and the bridge (at 1000 feet) on a left base to Runway 18. There is no break, so aircraft in section must separate prior to crossing the strand.

During winter months, San Diego can have severe rainstorms with strong southerly winds. To permit Runway 18 landings during these conditions, circling approaches from Runway 29 TACAN and radar approaches can be expected (weather permitting). When the ceiling is less than 1000 feet, you will receive an ASR approach to Runway 29, and the controller will instruct you to break off the approach prior to Coronado and circle to land on Runway 18. North Island uses the ASR approach procedure (using precision radar) because they can descend you to MDA at a sufficient distance from the airport to allow you, hopefully, to break out and make the circling approach safely without flying over Coronado.

Helicopters. More than half of the aircraft based at North Island are helos. They normally depart from the Runway 18 threshold area, either making a normal runway takeoff, or depart to the west then turn south and fly out the channel (over San Diego Bay between North Island and Point Loma). Because the helos use the Runway 18 threshold area, there is a displaced takeoff threshold for fixed-wing aircraft that is 700 feet from the normal Runway 18 threshold.

Helos departing North Island maintain 300 feet or below until 3 DME, then usually 500 feet or below. Nine miles southeast, just off the coast from OLF Imperial Beach, helos may be operating as high as 2000 feet. OLF Imperial Beach is used almost exclusively by North Island-based helos. In the vicinity of that airport, COPTER instrument approaches operate at altitudes 1000 feet below the altitudes used on the North Island Runway 29 TACAN and GCA approaches. Fixed-wing aircraft, especially those making a VFR approach, should keep a sharp lookout for helos and give them plenty of clearance.

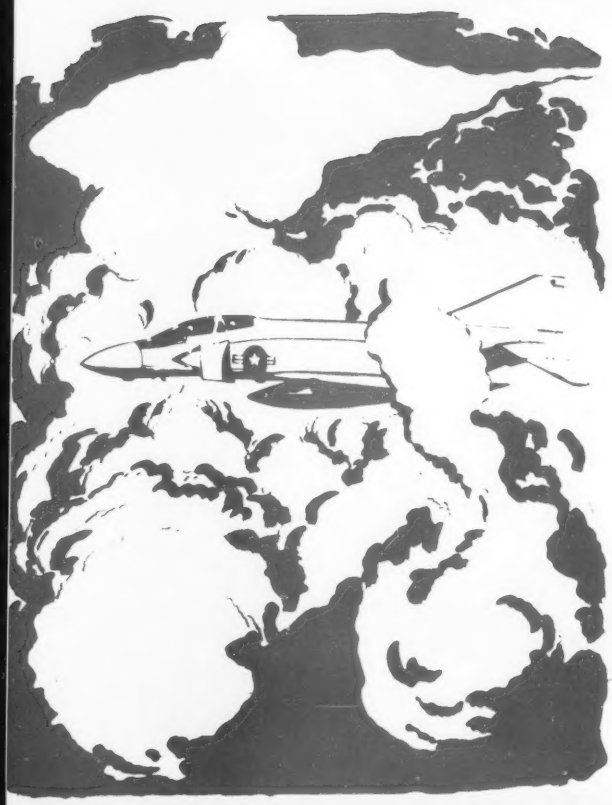
The tragic 1978 midair collision, which occurred only a few miles away, should remind pilots that you've got to keep your eyes open, especially when operating in the terminal area. Within 15 miles of North Island there are seven other airports. Much of the local traffic consists of light civil aircraft, all of which are difficult to see, and many

which are uncontrolled. In an attempt to exert more positive control at San Diego, TRSA was recently placed in operation. The base of the TRSA over NAS North Island is 3000 feet. A San Diego TCA is tentatively scheduled to go into operation in the fall of '79. Consult the *Airman's Information Manual* and *Graphic Notices and Supplemental Data* for details.

Practically every Navy/Marine pilot makes it to North Island sooner or later. You may come here to load aboard for a WestPac deployment, stage out of here for CQ, bingo from the boat, or just fly here on a cross-country training hop to visit San Diego or Tijuana. Regardless of the reason, be aware of the special problems of North Island, thoroughly plan your flight, keep your head on a swivel, and have a safe and pleasant visit.

Special Notice. North Island's runways are scheduled to be closed for major resurfacing some time in the winter of '79-'80. While the intersection is being resurfaced, the airport will be closed to fixed-wing aircraft. Pilots filing for North Island should expect arrival delays when Runway 29 is closed and the airport is IFR. The Runway 36 GCA and TACAN approaches, and the Runway 18 circling approach conflict with Lindbergh Field's traffic and must be sequenced between their approaches. Be sure to check NZY NOTAMs and weather before filing for North Island. *Hasta la vista!*

PENETRATION *however slight!*



THE leader of a flight of two F-4Js contacted Approach Control for a section penetration to individual GCAs (weather was partial obscuration, 1000 scattered, estimated 4500 broken, 12,000 overcast; 3 miles visibility in *thunderstorms* and haze). The penetration request was approved, and heading and altitude assignments were issued. Upon entering solid IMC during the penetration, the wingman lost sight of Dash 1 and broke away to the right. As he gained the prescribed separation, he encountered moderate hail. After regaining VMC, Dash 2 noticed that there was damage done to his ALQ-126 radome and antenna equipment. Upon request, the flight was vectored together to a joinup by Approach Control, and a visual inspection revealed no further damage to Dash 2's aircraft. The flight then made individual GCAs to uneventful landings at NAS Midatlantic Coast.

This type of incident can be expected any time the thunderstorm season is in full bloom. It demonstrates the danger of thunderstorm penetration, which, *however slight,* can be very exciting! Positive control by Approach Control or other agencies does not ensure immunity from weather's severe phenomena. It's an aid in the form of *assistance* and *advisory* service, not a crutch to positively keep you away from or out of Mother Nature's wrath. The primary responsibility still remains with the aircrew to use proper judgment and common sense when faced with such situations. Sometimes inadvertent penetration occurs, but any time you penetrate, however slightly, you must be prepared to take your shots!

NAVY
64
B Rader

Want to buy a farm?

By CDR W. R. Jenkinson
CO, HS-4

AFTER about 3 hours of night, plane guard duties, the SH-3H *Sea King* was given a CCA to land and hot refuel. After landing on spot 4½ (as directed), trouble started to develop. The aft fueling station hose would not reach the helo. The forward station barely made it after the hose was rerouted between the helo's mainmounts. Further delays developed when the first two samples didn't look clear. A third sample was taken and was clear, the other two were checked and it was determined that the cloudy look was air, which had now dissipated.

The "Hotel" model SH-3 has the luxury of two UHF radios; one was tuned to launch frequency and the other to a CCA frequency. As the plane commander, I'll relate what I saw and some of my thoughts as the situation got tense. The thoughts of my copilot will follow. Incidentally, he was a lieutenant (junior grade) who was on his first night flight from the carrier.

On the CCA frequency, we could hear the carrier giving directions to a jet aircraft lining up for a CCA. As I remember, he was called at 8 miles about the time we started taking fuel. He was at 4 miles when we stopped. The "grapes" had some trouble getting the hose decharged and unhooked. The air boss inquired, "How much longer, 731?" I told him, "As soon as they get the hose out of the way I'll be ready to go." A few moments later the air boss told us, "There is an F-4 not far behind you, so we want you to expedite your departure." (Actually it was an A-3.)

I could hear the CCA controller talking to the jet, giving him heading and glide slope information. The boss hollered, "What's your problem, 731?" I told him, "I can't go until the chains are removed." The boss had given the green light, but the LSE saw that the fueling crew was still replacing the hose and therefore hadn't given the breakdown signal yet. CCA told the jet he was at 2 miles. I had recently read an article about an A-7 that had landed in the pack on a carrier (APPROACH, FEB '79), and thoughts of that story flashed through my mind, "It could happen here in a few minutes!"

The LSE finally gave us the breakdown signal, and the air boss was saying, "That's the slowest I've seen your crew move." "I agree, boss," was all I could say. The jet was within 2 miles. The boss' voice was getting louder and higher pitched as he yelled, "731, go immediately port when you lift." I was thinking it would be better to go starboard and cross the bow into the plane guard pattern. About now I heard CCA say, "You're at 1 mile." I hadn't seen the chains yet. The chain walker was moving agonizingly slow as he came around the nose of the helo to show me the chains and the chock. The boss was yelling "Lift off! Lift off!!" CCA was calmly saying, "Three quarters of a mile, call the ball." I was frantically waving the chock and chain guys out of the way.

Without signals from the LSE, I pulled the helo into the air. The boss was now screaming, "Go port, go port!!" I rotated the nose and stomped on the left pedal as I headed for the inky blackness. I noticed the red waveoff lights had started to flash. Now I realized we had two flying machines charging for the same airspace.

Since I was turned 90 degrees to the ship's heading and leaving the angle deck behind me, I started clawing for altitude, at least 300 feet and 60 knots. The air boss screamed, "Keep it low, 731," then more frantically yelled, "Get lower, get down, get down!!" My mental picture was that the jet had seen us over the deck and had waved off to the left. As I dumped the nose and collective simultaneously, I instinctively glanced to the left, expecting to see the silhouette of an F-4 very close to me.

The RAWS was beeping, and when I got back on the gages, "Oh, that flashing master caution light was bright!" I didn't even look at the altimeter. I leveled the wings and pulled the nose 5 degrees up and yanked in a healthy load of collective. Departure cleared me downwind to cross the stern at 4 miles. I was passing 500 feet, so I got it back down to 150 feet, put the altitude hold (BARALT) on, and turned downwind. I was numb. We went to 8 miles downwind, then turned to cross the extended centerline, after Departure told us to turn. I then let the nugget have it and sat in a hot sweat as I rehearsed how we had gotten

into that situation.

The copilot's narrative reads: The CO (HAC) gave the signal to pull the chocks and chains, and the air boss was starting to get excited. The lineman was unaware of the incoming jet and was just routinely taking down the chains. He got the chains off about the time CCA reported 1 mile. The air boss was getting excited and said, "I don't think I've ever seen your linemen go so slow." The CO agreed with him and tried to get them to hurry by waving. The two linemen held up the chocks and chains, and we waved them away.

Up to this point, I was relaxed because my HAC was the CO, and he was more experienced than I. When he started to get excited, so did I. I finished up the checklist, glanced to the left, and saw that the meatball had been turned off. However, the jet was still being vectored in for an approach. As I turned on the ASE and the overspeed overrides, the CO lifted into a hover, and I monitored the power. I caught a glimpse out my left side and saw the waveoff lights flashing red.

The air boss was yelling to turn port, so, as we cleared the deck at 80 feet and 20 knots, the CO started to turn to port. I quickly glanced at our power and flight instruments and saw we were in a 10-degree left turn, climbing, with the airspeed increasing. I then looked out of my window and saw the lights of the aircraft, about one-half mile, 300 feet, and on a track to pass our stern. Checking the gages showed us to be at 150 feet, 50 knots, and 5 degrees noseup.

The air boss said, "731, go low," and I looked back outside to see if the plane was any lower. It appeared as though the jet was still about 300 feet and going past our stern. I heard the RAWS beep and glanced back at the gages. We were at 80 feet on the radar altimeter, 60 knots, with wings level. I was experiencing a slight case of disorientation, but the instruments said we were OK, so I continued to monitor the radar altimeter and the VGI. I told the CO, "Eighty feet," and continued to monitor the gages.

Throughout this time, I was secure and relaxed, but was doing things faster because it was my first night flight off a carrier. I could feel the CO pulling in collective, and we started climbing back to 150 feet. We leveled off at 150 feet and turned to 290 degrees. The air boss told us to continue downwind for about 4 miles before turning left to enter starboard *delta*. The CO maintained control until we turned left at 8 miles, then let me fly into starboard *delta*.

It wasn't until we landed that I found out how grave a situation we had been in. The CO said that he was disoriented when we lifted off the deck and then let down. We later found out that it was an A-3 and not an F-4, and that it didn't go below 300 feet.

I learned some valuable lessons from this flight:

- Don't be afraid to ask if your pilot is disoriented;
- More communication on ICS may have helped the CO, because he could not see out the left side;
- That the feeling of security (training command syndrome) is a dangerous thing;
- Experienced people can "buy the farm" and get you indebted, too.

One would think that this scenario occurred during a training exercise off the coast of CONUS. Actually it occurred on a carrier deployed in WESTPAC.

The LSO saw the situation in a different light. He foresaw it developing and decided, if the helo wasn't off when the approaching aircraft was at three-quarters mile, he would turn off the lens, which he did. He felt he had the situation well in hand. However, he didn't inform anyone else of his plans.

What are some of the things that could have been done to prevent this situation from developing?

- The pilot in 731 could have switched radios and called the aircraft approaching, stating, "A helo is on deck and will remain, expect a waveoff, acknowledge." (In the absence of acknowledgement, the pucker factor would have risen.)
- The LSO could have told the air boss that he would wave the approaching aircraft off at three-quarters of a mile.
- The boss, who is in overall control, could have initiated a hold on the helo and waved the A-3 off much earlier.
- The helo pilot could have told the boss, "Wave him off, boss," and remained on deck.

This incident only occurred because various members of the ship/air wing units were not talking to each other. Early in his CCA, the A-3 should have been told that a helo was on deck, but CCA didn't realize it was there. The A-3 pilot would then have been attuned and listening for a call that the helo was clear.

Without communicating, the fighting team of a carrier becomes an ineffective group of individuals inviting a disaster. Let's all work to avoid the disasters and near-disasters in the future. ◄

A Superior pilot is one who stays out of trouble by using his Superior judgment to avoid situations which might require the use of his Superior skill.

Courtesy Delta Airlines, UP FRONT

BRAVO ZULU

What started out as a routine VFR logistics hop for the crew of HC-6's VH-3A helo (BUNO 147145) turned into near-disastrous results. Through outstanding coordination and airmanship demonstrated by the crew, a major accident was averted.

AFTER discharging passengers at the Pentagon Pad, the crew, consisting of the HAC (helicopter aircraft commander), LT Skip White; (copilot) LT Brian Cox; FC (first crewman) AMS1 Wing; and SC (second crewman) AMS3 Lagroon and a passenger, lifted off for the return trip to NAS Norfolk via a planned stop at Davidson AAF. Shortly after takeoff with LT Cox at the controls at 200 feet AGL over DC's famous "mixing bowl" and its rush-hour traffic, a loud "explosion" was heard followed by a catastrophic engine failure and ensuing fire of No. 2 engine. Initial indication was transmission failure, but SC Lagroon broadcast, "Fire, No. 2 engine!", accompanied by No. 2's cockpit fire-warning light illumination. Pentagon tower confirmed, "HW34, you're on fire!"

LT White and crew executed NATOPS "Inflight Fire" and "Engine Failure" procedures while looking for a suitable place to put the flaming helo down. With nothing but rush-hour traffic in their frontal quadrant, LT White called for a return to the Pentagon Pad and LT Cox initiated a turn towards the Pentagon Pad for an emergency landing attempt. In the turn, the No. 1 engine firewarning light also illuminated! At this time, both engine compartments, the main rotorhead, and the flight control servos were engulfed in flames! Noting the No. 1 engine at 90 percent rotor RPM and No. 2 at zero, LT Cox set the helo up for a moderate-flair, no-hover, single-engine downwind approach to landing on the Pentagon lawn.

After the expeditious no-hover landing, LT White secured No. 1 engine speed selector, but attempts at No. 2 failed as it was frozen. He then actuated the fire extinguisher "T" handles, discharged the fire extinguishers, secured the fuel panel, and set the rotor brake. The rotor brake was inoperative due to ruptured hydraulic lines. The aircraft's interior was full of smoke, and "Abandon Aircraft" procedures were carried out under the assistance of the crewmen, Wing and Lagroon. All were able to exit the burning helo without further incident. Total time from liftoff to land was 2 minutes! It was later determined that the catastrophic engine failure of No. 2 was caused by internal failure of the fuel manifold in the combustion chamber. This in turn caused turbine blade separation which ruptured the titanium shield separating No. 1 and No. 2 engines, resulting in No. 1's firewarning elements to illuminate. Further fire damage was due to intense heat from burning atomized hydraulic fluid in the rotor brake and main transmission areas.

The Pentagon crash crew, assisted by other local military and civilian fire departments, extinguished the residual fire within 10 minutes after landing. The quick response, professionalism, and coordination of LT White's crew and local crash crews undoubtedly prevented loss of the aircraft, those in the air, and many travelers on the ground. Prior planning, rapid response, and overall teamwork were the keys to successful handling of this multiemergency situation. Well done to all that were involved in this near tragic mishap!

Standing (left) LT Skip White, (right) LT Brian Cox; kneeling (left) AMS3 Lagroon, (right) AMS1 Wing.

The process by which Fleet units can alert higher authority to perceived deficiencies in life support equipment is defined in OPNAVINST 4790.2A. The process by which deficiencies are corrected, or the degree of Fleet participation in the resolution of these problems, is not well known, particularly at the squadron level. This article will attempt to explain how the deficiency correction process works, for existing equipment, under the auspices of the ILS/AMP.

What in the world is the ILS/AMP?

By LCDR John T. Shields

BEFORE getting into what the ILS/AMP (Integrated Logistic Support/Acquisition Management Panel) for ALSS (Aviation Life Support Systems) is and how it works for you, some definitions are in order. ALSS is defined as those items of clothing and equipment needed to allow aircrewmembers and aircraft passengers to: function within all parameters of the flight environment; safely escape from disabled aircraft and descend to the surface; and survive on land or water until rescued. The ILS/AMP is a semiannual meeting of operational, support, and supply activities which deal in problems with existing ALSS equipment. The ILS/AMP members are responsible for implementing, within their commands, the expeditious flow of events required in accomplishing integrated logistic support and acquisition management for problems encountered with *existing* ALSS.

The ILS/AMP is chaired by a representative from Naval Air Systems Command, and panel members consist of Type Commanders, cognizant field activities, and logistic support elements. Individuals or groups from squadrons, wings or Aviation Physiology Training Units may also attend and participate, although they will not be voting members of the panel.

Chief of Naval Operations (OP-05 Rep.) (Advisory Member)
Commander, Naval Air Systems Command
Commander, Naval Air Force, Atlantic
Commander, Naval Air Force, Pacific
Commanding General, Fleet Marine Force, Atlantic
Commanding General, Fleet Marine Force, Pacific
Chief of Naval Reserve
Chief of Naval Education and Training (CNET)
Naval Air Development Center
Naval Weapons Center, China Lake
Naval Safety Center
Naval Aviation Logistics Center
Aviation Supply Office
Naval Air Technical Services Facility

Panel members compose the ALSS technical team, who are capable of effectively analyzing, prioritizing, coordinating, and monitoring problems which fall under the umbrella of the ILS/AMP.

Panel members, acting under the direction of their commands, are charged with the following duties:

- Review and define Fleet-reported problems and determine the optimum method of resolution.
- Assist in the development of the solution.
- Review and evaluate reports on new or changed equipment disseminated for Fleet evaluation, and make recommendations concerning changes to equipment prior to Fleet introduction or cancellation of further development.

- Review and make recommendations concerning proposed solutions to Fleet problems requiring changes in configuration.
- Review and make recommendations concerning proposed solutions to Fleet problems requiring changes to logistic support elements.
- Identify those areas that have interface with a weapon system and provide consolidated recommendations for appropriate acquisition or Engineering Change Proposal (ECP) action.
- Advise all concerned when a pending action or change is not recommended.
- Document funding requirements on recommended proposed changes for acquisition of hardware and ILS.
- Be responsible for ensuring, when the proposal is approved, that all elements of the ILS/AMP decisions and recommendations are implemented within each member's area of responsibility.
- Generate a milestone chart, as appropriate, and monitor the necessary implementation action.
- Monitor kit program and Fleet introduction items to ensure timely installation and issuance.

The ILS/AMP deals only with the problems or modifications on existing equipment and devices currently in the inventory. New equipment developments are not considered by the ILS/AMP.

Either through individual aircrewman participation or TYCOM representation, the Fleet problems and perceived deficiencies are presented to the ILS/AMP for resolution. Once the problem makes the NAVAIR ALSS/ILS/AMP Task Prioritization List, the Fleet can be assured that funding will be made available, according to urgency (category assigned), to correct the problem.

In summary, the ILS/AMP is the main coordination entity for ALSS, and only through the NAVAIR ALSS/ILS/AMP Task Prioritization List will funding be provided for corrective action on existing ALSS equipment. In order for the ILS/AMP to work for the aircrewmen in the Fleet, squadrons and wings should ensure that their TYCOM representatives are aware of their problems and are prepared to present them to the ILS/AMP. The ILS/AMP is a very powerful and action-orientated panel which, when provided with real Fleet problems, will prove to be an effective force for solving Fleet deficiencies.

The next ILS/AMP meeting is scheduled for 23-25 October and will be hosted by COMNAVAIRLANT. Further information on the ILS/AMP can be obtained from OPNAV Instruction 5420.75A and the ILS/AMP Meeting Report, dated 1 March 1979 (released by COMNAVAIRSYSCOM). ◄

A STEP FORWARD

Joint FAA/Navy interface computer system enhances coastal air safety

A HIGH-speed air traffic control computer interface system that will improve air safety in the offshore oceanic areas along the Southern California coast was commissioned on 15 March 1979 by the U.S. Navy and the Federal Aviation Administration.

The computer interface will tie together FAA's National Airspace System computer at Palmdale, California and the Navy's Fleet Area Control and Surveillance Facility (FACSFAC) computer at NAS North Island, San Diego, and will provide flight information for the Southern California area.

Flight data on aircraft departing Miramar Radar Air Traffic Control Facility, El Toro, and other military bases in Southern California will be relayed by the FAA Air Route Traffic Control Center at Palmdale at 3600 words a minute into the Navy's computer at FACSFAC.

The Navy FACSFAC facility monitors a 600,000 square mile area in the Pacific Ocean and controls about 250-300 Navy flight operations daily in the offshore oceanic area. FACSFAC provides military aircraft air traffic containment and keeps military aircraft away from civil flight routes along the coast and in transcontinental air corridors leading to Hawaii and Tahiti. The FACSFAC computer alerts Navy controllers when a military aircraft is within 5 miles of a civil air corridor so that the military traffic can be diverted from areas where civil aircraft are flying.

The FACSFAC facility in San Diego is a forerunner of a series of Navy installations planned to control Navy training activities in offshore ocean areas. Similar Navy installations have been constructed in Jacksonville, FL, and Virginia Capes, VA, and will be automated within the next 2 years. ◄

Letters

Re: "Hey, Paddles, there are no lights down there!" (Or are there?)

FPO, San Francisco – The article in the FEB '79 issue, "Hey Paddles . . . ", nearly had an instant replay in February of this year aboard a west coast carrier. Maybe they didn't get to read the article in time to prevent another near-tragic incident. However, they were more fortunate than their east coast counterpart, who lost several lives and airplanes in '78 in a similar, yet more unfortunate accident.

The latest incident involved a Marine F-4 during carrier quals. Following a normal F-4 arrestment, the starboard inboard wire support on No. 4 CDP came loose. The wire was partially retracted and two topside personnel went out to replace the wire support. The A/G (arresting gear) officer walked onto the landing area, thereby fouling the deck. The incident *Phantom*, now in his approach, called the "ball" and continued down the chute. The LSO, unaware of the fouled deck (in spite of the reported *red* fouled deck light), continued advisory calls to the F-4 'till touchdown. Just prior to touchdown, topside personnel in the landing area ran to starboard to clear the area for the encroaching aircraft! The F-4 landed forward of the No. 3 CDP and continued up the deck until its tailhook engaged the partially retracted No. 4 CDP, causing it to catastrophically fail. The temporarily restrained *Phantom* boltered and made an uneventful divert to its bingo field. No one was hurt. No further damage was done.

Both the controlling and backup LSOs stated that they saw a *green* light. However, the A/G officer and several qualified observers reported that it was *red*. Perhaps most amazing of all is that this incident took place in *broad daylight*! Incidents like this really raise some questions. Don't LSOs ever look around to see what's happening on deck? Doesn't a pilot ever look at the deck to check his lineup? (But not to spot the deck, of course!) Was the RIO so locked up on the airspeed indicator that he couldn't take a peek at the "ball" and the lineup? Questions like these shouldn't go unanswered, or else it'll be "into-the-pack" again.

It seems that four professionals became so intent on one portion of the task at hand that they overlooked some other very important conditions. Keeping your head on a swivel and staying on top of the situation don't apply only during ACM and emergencies. They are critical during all phases of flight. Failure to comply can, and often does, have catastrophic results – as was the case of the feature article in February's issue of APPROACH.

Anonymous

● The article in reference was written and published 1 year after its actual occurrence. As the response above so states, it nearly happened again, 1 year later. The message should be clear . . . "Safety can never take a break!" Maybe the final paragraph of the article, "Hey, Paddles . . . " is worthy of being reprinted in a modified form to fit this latest attempt at infamy:

"The basic procedures that were violated brought about *near* catastrophic results. Several other obvious and basic rules *may not have* been practiced or followed. Common sense and judgment could have prevented this mishap, *too*, if used in a timely manner. However, they were not, and the results have been recorded – *again*. Hopefully they will be remembered and applied the next time a similar situation arises. The solution to these situations are fundamental: communicate; don't assume anything you don't have to; eliminate the unnecessary. Mishaps can be prevented, but you have to work at it!"

Several Good Points

APO, New York – I much enjoyed the article "The Other Side of the Bag" in the JUN '79 issue of APPROACH. While hitting on an area of flying which cannot get too much emphasis, this article contained a few incomplete or misleading points which I think should be cleared up. A little more information should clarify these points.

When providing an ASR approach, the controller will issue the published MDA prior to the descent point on final. The pilot does not need to ask for it and, if it will not be a circling approach, he won't need to give the controller the category of his aircraft (straight-in MDAs are the same for all category aircraft). The article also implied that recommended altitudes are provided every mile on final; actually they are normally only issued when specifically requested by the pilot.

The article mentioned that PAR minimums are now published on approach plates. Actually, they are only printed on high-altitude approach plates. Also, in the European theater, ASR and PAR minimums are published in the front of the approach plate books, not in the Enroute Supplement.

I would also like to clarify the author's discussion on no-gyro approaches; in particular the standard rate turn. The Air Traffic

APPROACH welcomes letters from its readers. All letters should be signed though names will be withheld on request. Address: APPROACH Editor, Naval Safety Center, NAS Norfolk, VA 23511. Views expressed are those of the writers and do not imply endorsement by the Naval Safety Center.

Controller's Handbook (FAAH 7110.65A) states that a standard rate turn is 3 degrees per second. Thus, a 90-degree one-half standard rate turn would take 1 minute, not 2 as stated in the article. Furthermore, I believe it incorrect to say that the pilot can expect "a lot less glide slope information" just because he's getting a no-gyro approach. Most controllers find a no-gyro approach as easy, if not easier, to give than a standard approach.

One other point. At USAF bases, don't expect the PAR controller to have the ability to call you at any decision height other than the one published.

CDR Moore's discussion on the missed approach point was most welcome. Two more facts should also be considered when planning an approach. On nonprecision approaches, the difference between the published final approach course and the runway heading can be as much as 30 degrees and still be considered a straight-in approach. Also, the Visual Descent Point (VDP) now found on many nonprecision approaches is a valuable aid to be used by the pilot to determine his position in relation to a normal visual glide slope (VASI, etc.).

While I realize the Navy may use certain unique procedures that I, as an Air Force pilot, am not aware of, the discrepancies I have pointed out do apply to non-naval installations and could be a factor to Navy pilots transiting these bases. Including this Air Force perspective will broaden the applicability of this article.

Capt Gil Pettyjohn, USAF
1868th Facility Checking Squadron

• Your letter is very helpful in clearing up several points. One item of difference is that it is standard procedure for Navy controllers to call recommended altitudes on all ASR approaches.

Watches vs. Compasses

MCAS Yuma – I recently read an interesting article in the USAA newsletter "AIDE" about the potential danger to boaters who wear the new battery-operated watches because of their interference with a magnetic compass. The article goes on to say that "A battery-driven watch can be 5 feet away and still make your compass nervous."

As an experienced A-4 "compass swing artist" and former avionics officer, I have experienced the acute sensitivity of the standby compass, and I wonder if last year's Christmas present could be playing havoc with our maintenance personnel and pilots. Our standby compass system is rarely totally relied upon, however, I find myself frequently cross-referencing its heading to verify my primary heading indicator.

I propose two questions to the Safety Center: "Do battery-operated watches create interference with aircraft standby compasses?" and "Why aren't standard issue watches available to Marine pilots (other than in a combat zone) to avoid such a hazard?"

Capt Roger H. Carlin, USMCR

• Neither our avionics expert nor the people at NAVAIRSYSCOM have any substantiation of this particular problem. While the potential for some interference exists, aircraft magnetic compasses are routinely exposed to much stronger sources of magnetic interference than the typical boat compass. If any of our readers can substantiate the occurrence of this interference, however, we'd like to hear about it. U.S. Government wristwatches are only available to aircrew in combat zones, according to the current NAVAIR Allowance List (NAVAIR 00-35QH-2), and will remain so until a definite problem or hazard is documented.

We're Doing It

USS AMERICA – This letter is in response to two letters in the JUN '79 issue of APPROACH. The first, from AE3 Kiser of VS-31, dealt with aircrew leaving their aircraft with their visors up after they have recovered. CVW-11, which is our squadron's operational wing, has been putting the word out to all aircrew to keep their visors down after exiting their aircraft since the wing reported aboard in January. This not only increases eye protection for all of us aircrew, but also sets a good example for the enlisted flight deck personnel to follow. Otherwise, you have a "Do as I say, not as I do" situation. Pilots and NFOs have, for the most part, been heeding this.

The second letter I respond to, from AMS2 Martin of HS-8, dealt with bringing helos aboard after the fixed-wing recovery, and the problems of keeping the landing spots clear of personnel. This potential problem has been avoided on this ship by the air boss. At the end of the fixed-wing recovery, with helos still to go, he announces over the 5MC, "Fixed-wing recovery complete, helos to go on spots (wherever)." This alerts all flight deck personnel to remain clear of the helo spots until the boss announces, "Recovery complete."

We all anxiously await the receipt of our new APPROACH magazines each month. It's one of the finest and most informative publications I've ever come across. As good as they always are, the JUN '79 issue, I feel, is one of the best issues I've read. I look forward to seeing July's issue.

LT Jon B. Jonas
VAW-124

• We appreciate your comments about the magazine. Even more, we appreciate the fact that people are out there working to make everyone's life safer.

Re: "An Aviator's Guide to Self-Destruction"

Middlesex, England – I write in reference to the article entitled *"An Aviator's Guide to Self-Destruction"* featured in the MAY '79 edition of your magazine. Under the heading of "Petroleum Jelly," the authors advise that this substance becomes crusty when exposed to 100 percent oxygen. "If it is used to moisten dry-scaling areas of the mouth and nose, and then exposed to 100 percent oxygen, the petroleum-based product will become the texture of sandpaper. This can lead to severe nosebleeds and bleeding lips in flight."

While I do not dispute these facts, I would draw your attention to what has been left unsaid. First, the combined effect of petroleum jelly and oxygen on the mask itself can react with the material to render it unserviceable. We have had cases such as this in the Royal Air Force. Second, and I believe very much more significant, is the potentially explosive nature of petroleum-based ointments when exposed to pure oxygen. In the right conditions, an aviator could, I suggest, experience very much more devastating effects than the suggested nosebleed!

C. W. J. Butler
Hdqtrs. No. 18 Group

• We fully agree that a combination of petroleum jelly (or lip balm) and oxygen will react in a way to render an oxygen mask unserviceable. These substances can also cause the inspiratory and expiratory valves to malfunction, unless the mask is cleaned on a regular basis. In regard to the more devastating effects to which you refer, the presence of petroleum jelly, combined with oxygen, does enhance the chance for combustion. The Navy removed carbon microphones from oxygen masks in 1969, and has had no incidents of this nature since that time. With an alternate ignition source, however, the possibility of combustion certainly exists. ◄

MOUTH TO MOUTH

AFTER takeoff, and while climbing to cruise altitude, a staff sensor instructor noticed that a trainee for sensor station III in the P-3 crew was slumped over at his ditching station. A closer examination disclosed the student was unconscious and barely breathing.

The instructor immediately released him from his seat, cut through the shoulder straps because of body rigidity, and stretched him on the deck. The instructor yelled for oxygen and started mouth-to-mouth resuscitation. Crewmembers working to get the oxygen had difficulty removing the protective plastic bag from the mask of the sensor station III walkaround bottle.

When the oxygen mask was passed to the instructor, the hose would not reach, and a delay was incurred while the bottle was removed from the holder. After the trainee was first given oxygen he showed some signs of revival; however, shortly thereafter, the instructor saw no flow on the regulator. The mask was swapped for another one. The trainee responded to the second oxygen mask and became semiconscious. His eyes were open and glassy, but his body remained rigid.

Meanwhile the pilot had been advised of the crewman's plight and headed back to base. After landing and taxiing to the line, they were met by medics in an ambulance and the trainee was taken to the dispensary.

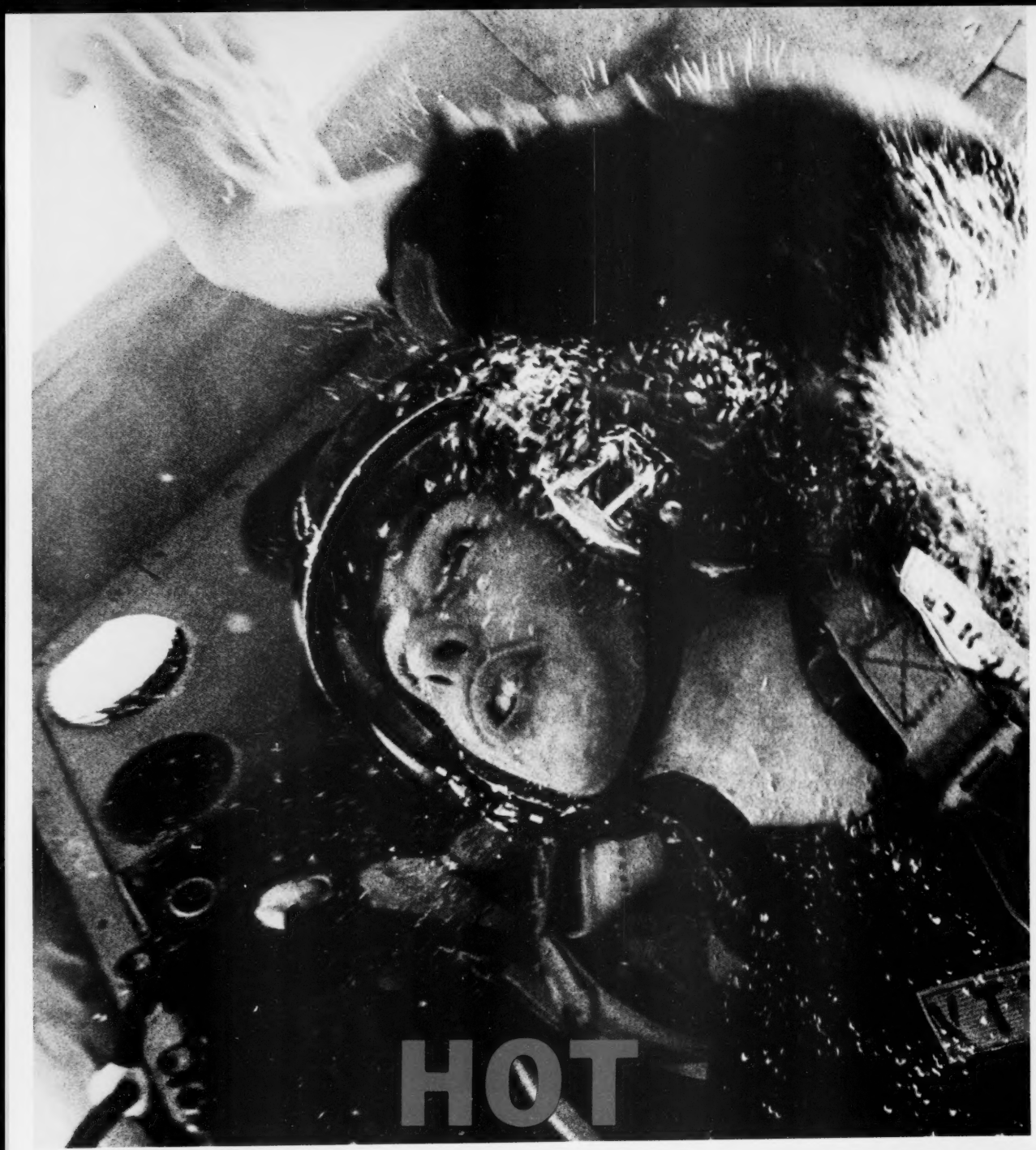
Before the flight, the trainee had felt OK. However, he had cleaned the aircraft head using a general purpose, aerosol, spray deodorant (NSN 6840-00-721-6055) obtained through the supply system. There was a warning on the spray can indicating that *deliberately concentrating and inhaling the contents may be harmful or fatal.* While working in the head, he experienced considerable sweating. It is possible that his physical exertion combined with the use of the aerosol was a factor of his incapacitation.

The quick, professional manner in which AW1 James Smith, of VP-17, reacted may well have saved the life of the trainee. Despite the problems with the oxygen bottles, his immediate attention to the trainee's symptoms prevented a more serious situation. The squadron has removed the taped plastic covers and replaced them with easier to open velcro strips.

All users of the general purpose, aerosol deodorant are cautioned to avoid prolonged use in confined areas. Postflight inspection of the oxygen bottles, regulators, and masks revealed no discrepancies. It is presumed the trainee lacked sufficient lung power to activate the regulator in the normal diluter/demand mode.

We commend you, AW1 James Smith, for your quick, professional actions. You have earned a well deserved Attaboy!

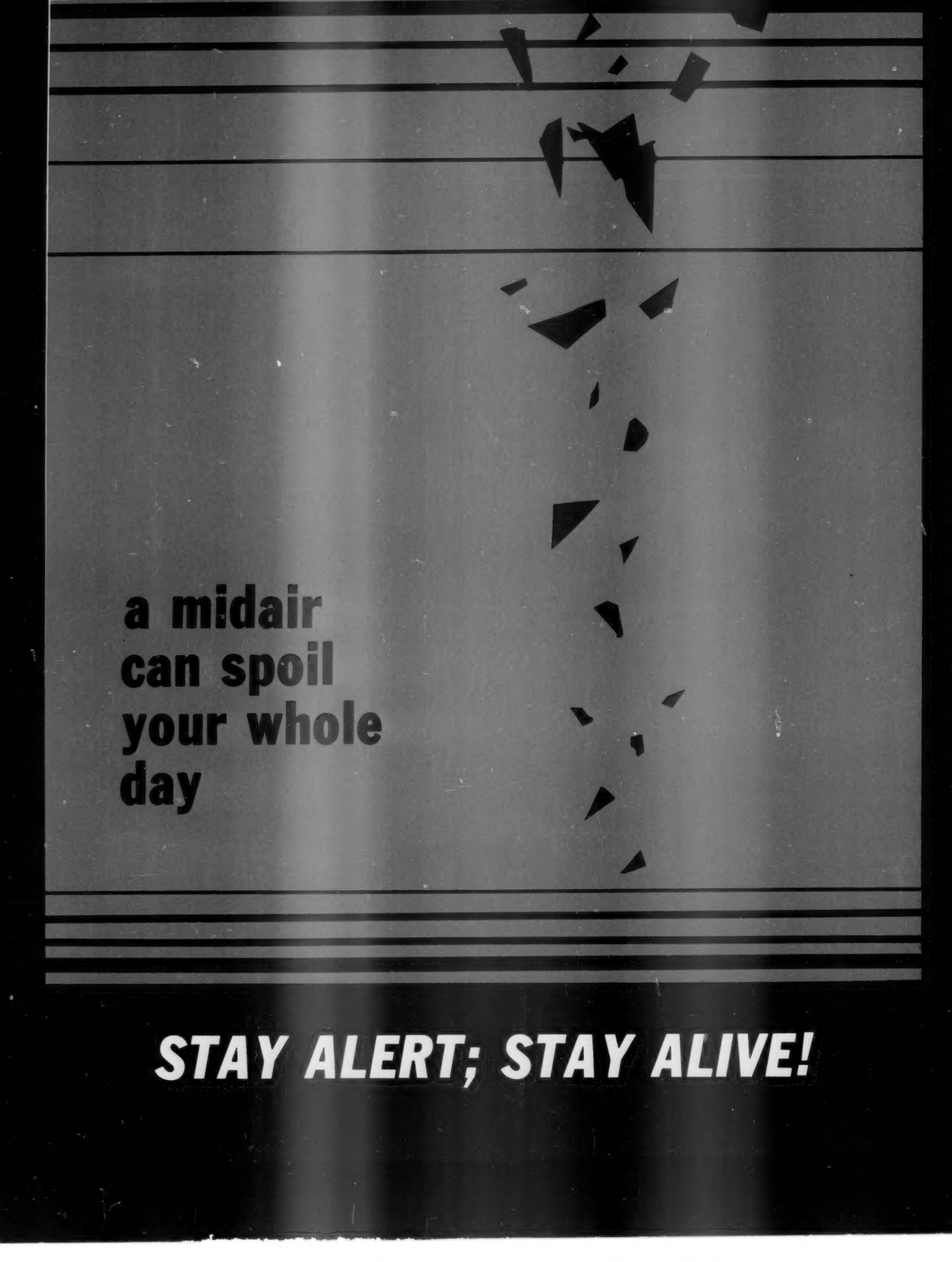
☆U. S. GOVERNMENT PRINTING OFFICE: 1979—635-002/13



pilots know emergency procedures

COLD

How about you?


a midair
can spoil
your whole
day
STAY ALERT; STAY ALIVE!